



# Sequence Listing

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<120> PROMOTION OR INHIBITION OF ANGIOGENESIS AND  
CARDIOVASCULARIZATION BY TUMOR NECROSIS FACTOR  
LIGAND/RECEPTOR HOMOLOGS

<130> P1765R1

<140> US 09/613,972

<141> 2000-07-11

<150> US 60/143,304

<151> 1999-07-12

<160> 22

<210> 1

<211> 1008

<212> DNA

<213> Homo sapiens

<400> 1

cacgcacttc acctgggtcg ggattctcag gtcataaacg gtcccagcca 50  
cctccgggca gggcgggtga ggacggggac ggggcgtgtc caactggctg 100  
tgggctcttg aaacccgagc atggcacagc acggggcgat gggcgcgttt 150  
cgggccctgt gcggcctggc gctgctgtgc gcgctcagcc tgggtcagcg 200  
ccccaccggg ggtcccgggt gcggccctgg gcgcctcctg cttgggacgg 250  
gaacggacgc gcgctgctgc cgggttcaca cgacgcgctg ctgccgcgat 300  
taccggggcg aggagtgtg ttccgagtgg gactgcatgt gtgtccagcc 350  
tgaattccac tgcggagacc cttgctgcac gacctgccgg caccaccctt 400  
gtcccccagg ccagggggta cagtcccagg ggaaattcag ttttggcttc 450  
cagtgtatcg actgtgcctc ggggaccttc tccggggggc acgaaggcca 500  
ctgcaaacct tggacagact gcacccagtt cgggtttctc actgtgttcc 550  
ctgggaacaa gaccacaaac gctgtgtgcg tcccagggtc cccgccggca 600  
gagccgcttg ggtggctgac cgtcgtcctc ctggccgtgg ccgcctgcgt 650  
cctcctcctg acctcggccc agcttggact gcacatctgg cagctgagga 700  
gtcagtgcac gtggccccga gagaccagc tgctgctgga ggtgccgccg 750  
tcgaccgaag acgccagaag ctgccagttc cccgaggaag agcggggcga 800  
gcgatcggca gaggagaagg ggcggctggg agacctgtgg gtgtgagcct 850

ggcgcctc cggggccacc gaccgcagcc agcccctccc caggagctcc 900  
ccaggccgca ggggctctgc gttctgctct gggccgggcc ctgctcccct 950  
ggcagcagaa gtgggtgcag gaaggtggca gtgaccagcg ccctggacca 1000  
tgcagttc 1008

<210> 2  
<211> 723  
<212> DNA  
<213> Homo sapiens

<400> 2  
atggcacagc acggggcgat gggcgcgttt cgggccctgt gcggcctggc 50  
gctgctgtgc gcgctcagcc tgggtcagcg cccaccggg ggtcccgggt 100  
gcggccctgg gcgcctcctg cttgggacgg gaacggacgc gcgctgctgc 150  
cgggttcaca cgacgcgctg ctgccgcgat taccggggcg aggagtgctg 200  
ttccgagtgg gactgcatgt gtgtccagcc tgaattccac tgcggagacc 250  
cttgtgcac gacctgccg caccaccctt gtccccagg ccagggggta 300  
cagtcccagg ggaaattcag ttttggttc cagtgtatcg actgtgcctc 350  
ggggaccttc tccgggggcc acgaaggcca ctgcaaact tggacagact 400  
gcacccagtt cgggtttctc actgtgttcc ctgggaacaa gaccacaac 450  
gctgtgtgcg tcccagggc cccgccggca gagccgctg ggtggctgac 500  
cgtcgtcctc ctggccgtgg ccgcctgcgt cctcctcctg acctcgccc 550  
agcttgact gcacatctgg cagctgagga gtcagtgcac gtggccccga 600  
gagaccagc tgctgctgga ggtgccgccg tcgaccgaag acgccagaag 650  
ctgccagttc cccgaggaag agcggggcga gcgatcggca gaggagaagg 700  
ggcggctggg agacctgtgg gtg 723

<210> 3  
<211> 241  
<212> PRT  
<213> Homo sapiens

<400> 3  
Met Ala Gln His Gly Ala Met Gly Ala Phe Arg Ala Leu Cys Gly  
1 5 10 15  
Leu Ala Leu Leu Cys Ala Leu Ser Leu Gly Gln Arg Pro Thr Gly  
20 25 30  
Gly Pro Gly Cys Gly Pro Gly Arg Leu Leu Leu Gly Thr Gly Thr  
35 40 45

Asp	Ala	Arg	Cys	Cys	Arg	Val	His	Thr	Thr	Arg	Cys	Cys	Arg	Asp	50	55	60
Tyr	Pro	Gly	Glu	Glu	Cys	Cys	Ser	Glu	Trp	Asp	Cys	Met	Cys	Val	65	70	75
Gln	Pro	Glu	Phe	His	Cys	Gly	Asp	Pro	Cys	Cys	Thr	Thr	Cys	Arg	80	85	90
His	His	Pro	Cys	Pro	Pro	Gly	Gln	Gly	Val	Gln	Ser	Gln	Gly	Lys	95	100	105
Phe	Ser	Phe	Gly	Phe	Gln	Cys	Ile	Asp	Cys	Ala	Ser	Gly	Thr	Phe	110	115	120
Ser	Gly	Gly	His	Glu	Gly	His	Cys	Lys	Pro	Trp	Thr	Asp	Cys	Thr	125	130	135
Gln	Phe	Gly	Phe	Leu	Thr	Val	Phe	Pro	Gly	Asn	Lys	Thr	His	Asn	140	145	150
Ala	Val	Cys	Val	Pro	Gly	Ser	Pro	Pro	Ala	Glu	Pro	Leu	Gly	Trp	155	160	165
Leu	Thr	Val	Val	Leu	Leu	Ala	Val	Ala	Ala	Cys	Val	Leu	Leu	Leu	170	175	180
Thr	Ser	Ala	Gln	Leu	Gly	Leu	His	Ile	Trp	Gln	Leu	Arg	Ser	Gln	185	190	195
Cys	Met	Trp	Pro	Arg	Glu	Thr	Gln	Leu	Leu	Leu	Glu	Val	Pro	Pro	200	205	210
Ser	Thr	Glu	Asp	Ala	Arg	Ser	Cys	Gln	Phe	Pro	Glu	Glu	Glu	Arg	215	220	225
Gly	Glu	Arg	Ser	Ala	Glu	Glu	Lys	Gly	Arg	Leu	Gly	Asp	Leu	Trp	230	235	240

Val

<210> 4  
 <211> 951  
 <212> DNA  
 <213> Homo sapiens

<400> 4  
 ggcacagcac ggggcgatgg gcgcgtttcg ggccctgtgc ggccctggcgc 50  
 tgctgtgcgc gctcagcctg ggtcagcgcc ccaccggggg tcccgggtgc 100  
 ggccctgggc gcctcctgct tgggacggga acggacgcgc gctgctgccg 150  
 ggttcacacg acgcgctgct gccgcgatta cccgggagag gagtgctgtt 200  
 ccgagtgagg ctgcatgtgt gtccagcctg aattccactg cggagaccct 250

tgctgcacga cctgccggca ccacccttgt cccccaggcc aggggggtaca 300  
 gtcccagggg aaattcagtt ttggcttcca gtgtatcgac tgtgcctcgg 350  
 ggaccttctc cggggggccac gaaggccact gcaaaccttg gacagactgc 400  
 acccagttcg ggtttctcac tgtgttccct ggggaacaag acccacaacg 450  
 ctgtgtgcgt cccaggggtcc ccgccggcag agccgcttgg gtgggtgacc 500  
 gtcgtcctcc tggccgtggc cgcctgcgtc tcctcctgac ctcgggccag 550  
 cttggactgc acatctggca gctgaggagt cagtgcattg ggccccgagg 600  
 tctgtcacag cctggtgcgg ggaggtggga gcatggctgc ctgctgaccg 650  
 tggccccctt gcatagacct agctgctgct ggaggtgccg ccgtcgaccg 700  
 aagacgccag aagctgccag ttccccgagg aagagcgggg cgagcgatcg 750  
 gcagaggaga aggggaggct gggagacctg tgggtgtgag cctggctgtc 800  
 ctccggggcc accgaccgca gccagccctt ccccaggagc tccccaggcc 850  
 gcaggggctc tgcgttctgc tctgggccgg gccctgctcc cctggcagca 900  
 gaagtgggtg caggaaggtg gcagtgacca gcgccctgga ccatgcagtt 950

c 951

<210> 5  
 <211> 28  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Sequence is synthesized.

<400> 5  
 ggcacagcac ggggcgatgg gcgcgttt 28

<210> 6  
 <211> 19  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Sequence is synthesized.

<400> 6  
 cacagcacgg ggcgatggg 19

<210> 7  
 <211> 40  
 <212> DNA  
 <213> Artificial sequence

<220>

<223> Sequence is synthesized.

<400> 7

agcctgggtc agcgccccac cggggggtccc ggggtgcggcc 40

<210> 8

<211> 17

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is synthesized.

<400> 8

cgctgaccca ggctgag 17

<210> 9

<211> 40

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is synthesized.

<400> 9

gaggagtgtc gttccgagtg ggactgcatg tgtgtccagc 40

<210> 10

<211> 27

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is synthesized.

<400> 10

gaaggtcccc gaggcacagt cgataca 27

<210> 11

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is synthesized.

<400> 11

gctctgcgtt ctgctctg 18

<210> 12

<211> 24

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is synthesized.

<400> 12

ctggctcactg ccaccttcct gcac 24

<210> 13  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1857, 1875  
<223> unknown base

<400> 13  
cagctctcat ttctccaaaa atgtgtttga gccacttgga aaatatgcct 50  
ttaagccatt caagaactca aggagctcag agatcatcct ggaagctgtg 100  
gctcttttgc tcaatagtta tgttgctatt tctttgctcc ttcagttggc 150  
taatctttat ttttctccaa ttagagactg ctaaggagcc ctgtatggct 200  
aagtttggaac cattaccctc aaaatggcaa atggcatcct ctgaacctcc 250  
ttgcgtgaat aaggtgtctg actggaagct ggagatactt cagaatggct 300  
tatatttaat ttatggccaa gtggctccca atgcaaaact caatgatgta 350  
gctccttttg aggtgcggct gtataaaaac aaagacatga taaaaactct 400  
aacaacaaaa tctaaaatcc aaaatgtagg agggacttat gaattgcatg 450  
ttggggacac catagacttg atattcaact ctgagcatca ggttctaaaa 500  
aataatacat actggggtat cattttacta gcaaatcccc aattcatctc 550  
ctagagactt gatttgatct cctcattccc ttcagcacat gtagagggtc 600  
cagtgggtgg attggaggga gaagatattc aatttctaga gtttgtctgt 650  
ctacaaaaat caacacaaac agaactcctc tgcacgtgaa ttttcatcta 700  
tcatgcctat ctgaaagaga ctgaggggaa gagccaaaga cttttgggtg 750  
gatctgcaga aatacttcat taatccatga taaaacaaat atggatgaca 800  
gaggacatgt gcttttcaaa gaatctttat ctaattcttg aattcatgag 850  
tggaaaaaatg gagttctatt cccatggaag atttacctgg tatgcaaaaa 900  
ggatctgggg cagtagcctg gctttgttct catattcttg ggctgctgta 950  
attcattctt ctcatactcc catcttctga gaccctccca ataaaaagta 1000  
gactgatagg atggccacag atatgcctac cataccctac tttagatatg 1050  
gtggtgttag aagataaaga acaatctgag aactattgga atagaggtag 1100  
aagtggcata aaatggaatg tacgctatct ggaaatttct cttggtttta 1150

tcttcctcag gatgcagggg gctttaaaaa gccttatcaa aggagtcatt 1200  
ccgaaccctc acgtagagct ttgtgagacc ttactgttg tgtgtgtgtc 1250  
taaacattgc taattgtaaa gaaagagtaa ccattagtaa tcattagggt 1300  
taaccccaga atggtattat cattactgga ttatgtcatg taatgattta 1350  
gtatttttag ctagctttcc acagtttgca aagtgccttc gtaaaacagt 1400  
tagcaattct atgaagttaa ttgggcaggc atttggggga aaattttagt 1450  
gatgagaatg tgatagcata gcatagccaa ctttcctcaa ctcataggac 1500  
aagtgactac aagaggcaat gggtagtccc ctgcattgca ctgtctcagc 1550  
tttagaattg ttatttctgc tatcgtgtta taagactcta aaacttagcg 1600  
aattcacttt tcaggaagca tattcccctt tagcccaagg tgagcagagt 1650  
gaagctacaa cagatctttc ctttaccagc acactttttt ttttttttcc 1700  
tgcctgaatc agggagatcc aggatgctgt tcaggccaaa tcccaaccaa 1750  
attccccttt tcactttgca gggcccatct tagtcaaagtg tgctaacttc 1800  
taaaataata aatagcacta attcaaaatt tttggaatct taaattagct 1850  
acttgcnngt tgcttggtga aaggnatata atgattacat tgtaaacaaa 1900  
tttaaaatat ttatggatat ttgtgaaaag ctgcattatg ttaaataata 1950  
ttacatgtaa agct 1964

<210> 14  
<211> 177  
<212> PRT  
<213> Homo sapiens

<400> 14  
Met Cys Leu Ser His Leu Glu Asn Met Pro Leu Ser His Ser Arg  
1 5 10 15  
Thr Gln Gly Ala Gln Arg Ser Ser Trp Lys Leu Trp Leu Phe Cys  
20 25 30  
Ser Ile Val Met Leu Leu Phe Leu Cys Ser Phe Ser Trp Leu Ile  
35 40 45  
Phe Ile Phe Leu Gln Leu Glu Thr Ala Lys Glu Pro Cys Met Ala  
50 55 60  
Lys Phe Gly Pro Leu Pro Ser Lys Trp Gln Met Ala Ser Ser Glu  
65 70 75  
Pro Pro Cys Val Asn Lys Val Ser Asp Trp Lys Leu Glu Ile Leu  
80 85 90

Gln	Asn	Gly	Leu	Tyr	Leu	Ile	Tyr	Gly	Gln	Val	Ala	Pro	Asn	Ala	
				95					100					105	
Asn	Tyr	Asn	Asp	Val	Ala	Pro	Phe	Glu	Val	Arg	Leu	Tyr	Lys	Asn	
				110					115					120	
Lys	Asp	Met	Ile	Gln	Thr	Leu	Thr	Asn	Lys	Ser	Lys	Ile	Gln	Asn	
				125					130					135	
Val	Gly	Gly	Thr	Tyr	Glu	Leu	His	Val	Gly	Asp	Thr	Ile	Asp	Leu	
				140					145					150	
Ile	Phe	Asn	Ser	Glu	His	Gln	Val	Leu	Lys	Asn	Asn	Thr	Tyr	Trp	
				155					160					165	
Gly	Ile	Ile	Leu	Leu	Ala	Asn	Pro	Gln	Phe	Ile	Ser				
				170					175						

<210> 15  
 <211> 42  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Sequence is synthesized.

<400> 15  
 tgtaaaacga cggccagttt ctctcagaga aacaagcaaa ac 42

<210> 16  
 <211> 43  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Sequence is synthesized.

<400> 16  
 caggaaacag ctatgaccga agtggaccaa aggtctatcg cta 43

<210> 17  
 <211> 20  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Sequence is synthesized.

<400> 17  
 ccactgaaac cttggacaga 20

<210> 18  
 <211> 27  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Sequence is synthesized.



<400> 18  
cccagttcgg gtttctcact gtgttcc 27

<210> 19  
<211> 21  
<212> DNA  
<213> Artificial sequence

<220>  
<223> Sequence is synthesized.

<400> 19  
acagcgttgt gggctctgtt c 21

<210> 20  
<211> 38  
<212> DNA  
<213> Artificial sequence

<220>  
<223> Sequence is synthesized.

<400> 20  
gacgacaagc atatgttaga gactgctaag gagccctg 38

<210> 21  
<211> 34  
<212> DNA  
<213> Artificial sequence

<220>  
<223> Sequence is synthesized.

<400> 21  
tagcagccgg atcctaggag atgaattggg gatt 34

<210> 22  
<211> 24  
<212> PRT  
<213> Artificial sequence

<220>  
<223> Sequence is synthesized.

<400> 22  
Met Gly His His His His His His His His His Ser Ser Gly  
1 5 10 15

His Ile Asp Asp Asp Asp Lys His Met  
20